

REMARKS:

Applicant has carefully studied the nonfinal Examiner's Action and all references cited therein. The amendment appearing above and these explanatory remarks are believed to be fully responsive to the Action. Accordingly, this important patent application is now believed to be in condition for allowance.

Applicant responds to the outstanding Action by centered headings that correspond to the centered headings employed by the Office, to ensure full response on the merits to each finding of the Office.

Claim Rejection 35 U.S.C. 103(a)

Claims 1-4, 8 and 12 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Weaver (U.S. Patent No. 5,389,069) in view of Eggers et al. (U.S. Patent No. 5,681,282).

Regarding independent claims 1 and 12, the Office states that the Weaver reference discloses a device for manipulating a molecule in vivo relative to a target tissue, with reference to Fig. 5, comprising an elongated member 148 comprising a generally cylindrical nonconductive core post and at least two discrete electrodes (152, 154); the at least two discrete electrodes being circumferential rings disposed about the core and in axially spaced relation along the elongated member, each electrode being in circuit communication with a respective portion of a source of electrical energy, the discrete electrodes being configured to establish a first electromagnetic field in vivo between selected electrodes sufficient to cause an electromigration of a molecule relative to a target tissue and a second electromagnetic field sufficient to cause a transient permeability of a cell membrane within the target tissue; and an insulating material (seen as the material between the two electrodes) interposed axially between the electrodes for achieving relative electromagnetic isolation of the electrodes, referring to col. 2, lines 8-60 and col. 8, line 5-21 of Weaver. The Office additionally states, that although Weaver does not explicitly disclose more than two electrodes or the electrodes to be independently in communication with a power source, but that Eggers et al. teaches an

electrosurgical device that utilizes multiple electrodes that can all be independently controlled and connected to a power source at col. 5, lines 11-22 and col. 5, line 66 – col. 6, line 15. Therefore, the Office concludes that it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the device of Weaver with the teachings of Eggers in order to provide an apparatus that can be utilized over a larger area and can selectively apply energy to the patient while limiting unwanted heating.

Applicant respectfully disagrees with the finding by the Office. Independent claims 1 and 12 of the present invention include at least three discrete electrodes being circumferential rings disposed about a core and in axially spaced relation along the elongated member, each electrode being in independent circuit communication with a respective portion of a source of electrical energy, the discrete electrodes being configured to establish a first electromagnetic field *in vivo* between selected electrodes sufficient to cause an electromigration of a molecule relative to a target tissue and a second electromagnetic field sufficient to cause transient permeability of a cell membrane within the target tissue. As such, the circumferential ring electrodes of the present invention are configured such that an electromagnetic field can be established between the discrete circumferential ring electrodes.

With reference to Fig. 5, of the specification as originally filed, it can be seen that an electromagnetic field can be established between electrode 23 and electrode 24, or between electrode 25 and 26. Thus illustrating that in accordance with claim 1 of the present invention, the discrete electrodes are configured to establish a first electromagnetic field *in vivo* between selected circumferential ring electrodes.

In contrast, Egger describes at col. 6, beginning at line 15, that the tip region of the probe is composed of many independent electrode terminals designed to deliver electrical energy in the vicinity of the tip. Egger teaches that each individual electrode and the common electrode (e.g., a band of conductive material proximal to the electrode array at the tip or an external electrode which is placed on the outside of the patient's body) are connected to a power source having independently controlled or current-limited channels. As such, the high frequency voltage of Egger is established between the common electrode and the individual electrode. As such, Egger describes establishing an electromagnetic field between one individual electrode and a common

electrode. This is not equivalent to establishing an electromagnetic field between the individual electrodes as is disclosed and claimed by the present invention.

As such, Egger et al. does not describe each discrete electrode being in independent circuit communication with a respective portion of a source of electrical energy, the discrete electrodes being configured to establish a first electromagnetic field *in vivo* between selected electrodes as claimed by the present invention.

Weaver and Egger in combination do not teach all the elements of claims 1 and 12 of the present invention. Accordingly, claims 1 and 12 are believed to be patentable over Weaver in view of Egger and are believed to be in condition for allowance.

Claim Rejection 35 U.S.C. 103(a)

Claims 1-4, 8 and 12 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Tu et al. (U.S. Patent No. 5,941,845) and further in view of in view of Eggers et al. (U.S. Patent No. 5,681,282).

Regarding independent claims 1 and 12, the Office states that the Tu reference discloses a device for manipulating a molecule *in vivo* relative to a target tissue comprising an elongated member comprising a generally cylindrical nonconductive core post and at least two discrete electrodes; the at least two discrete electrodes being circumferential rings disposed about the core and in axially spaced relation along the elongated member, each electrode being in circuit communication with a respective portion of a source of electrical energy, the discrete electrodes being configured to establish a first electromagnetic field *in vivo* between selected electrodes sufficient to cause an electromigration of a molecule relative to a target tissue and a second electromagnetic field sufficient to cause a transient permeability of a cell membrane within the target tissue. The Office states that Tu does not explicitly disclose more than two electrodes or the electrodes to be independently in communication with a power source or insulating material between the electrodes. However, the Office concludes that the Eggers reference teaches an electrosurgical device that utilizes multiple electrodes that can be independently controlled and connected to a power source as well as insulation between the electrodes for achieving relative electromagnetic isolation of the electrodes at col. 5, lines 11-22 and col. 5, line 66 to col. 6, line

15. As such, the Office concludes that it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the device of Tu with the teachings of Eggers in order to provide an apparatus that can be utilized over a larger area and can selectively apply energy to the patient while limiting unwanted heating as well as to isolate the electrodes in order to prevent interruptions in flow.

As previously described in the response to the 103(a) rejection of Weaver in view of Egger, Egger et al. does not describe each discrete electrode being in independent circuit communication with a respective portion of a source of electrical energy, the discrete electrodes being configured to establish a first electromagnetic field *in vivo* between selected electrodes as claimed by the present invention as is recited in claims 1 and 12 of the present invention.

Tu and Egger in combination do not teach all the elements of claims 1 and 12 of the present invention. Accordingly, claims 1 and 12 are believed to be patentable over Weaver in view of Egger and are believed to be in condition for allowance.

Claims 2-11 are dependent upon claim 1, which has been shown to be allowable, and are therefore allowable as a matter of law.

If the Office is not fully persuaded as to the merits of Applicant's position, or if an Examiner's Amendment would place the pending claims in condition for allowance, a telephone call to the undersigned at (813) 925-8505 is requested.

Very respectfully,

SMITH & HOPEN



By:

Dated: July 20, 2007

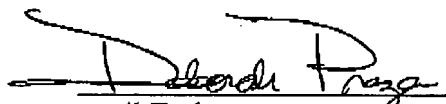
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CERTIFICATE OF FACSIMILE TRANSMISSION

(37 C.F.R. 1.8(a))

HEREBY CERTIFY that this Amendment AF including Amendments to the Claims and Remarks is being transmitted by facsimile to the United States Patent and Trademark Office, Art Unit 3767, Attn: Benjamin Huh, (571) 273-8300 on July 20, 2007.

Dated: July 20, 2007


April Turley